The Ethic

Pollution Prevention
The Environmental Ethic of Lancaster County

Public Health Starts Here.

Spring 2005

The P2 Corner

Health Department Goes Fuel Efficient

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Rising gas prices and protecting our environment demands that government be proactive. Lincoln-Lancaster County Health Department (LLCHD) employees take seriously the personal mission to promote public health by protecting the environment. Employees try to model the behaviors they would like to encourage in others. The recent purchase of a 2005 Honda Civic Hybrid vehicle for the Air Quality Program helps fulfill the department mission to protect human health and the environment and reduces fuel costs.

There are many excellent hybrid vehicles manufactured by Ford, Toyota, Honda, and GM. This article will primarily discuss the benefits of hybrid vehicles in terms of the Honda Civic Hybrid (not all Honda Civics are hybrids) because that was the vehicle purchased through the city bid process. No endorsement of this vehicle over any other is intended nor implied.

A hybrid combines the best features of an electric vehicle with a traditional gas-powered vehicle. When the car is accelerating, the electric motor assists the gasoline engine to reduce fuel consumption. When the car is decelerating, the gasoline engine charges the batteries for the electric motor. When the car is stopped with the brake depressed, the gasoline engine may shut off. The car will run off of the electric motor for A/C or heat. The gasoline engine will start back up once the brake is released. When the car is cruising at highway speeds, it runs solely on the gasoline engine, but when the car climbs hills the electric motor will engage to assist the gasoline engine.

This interaction between the two power sources reduces the vehicle's dependence on gasoline. Greater fuel efficiency means lower energy costs. EPA gas mileage ratings for the Honda Civic Hybrid are 48 m.p.g. on the highway and 47 m.p.g. in the city. In the month that the LLCHD has owned the vehicle, the gas mileage has averaged around 40 m.p.g.

Using less gas also lowers tailpipe emissions (air pollution). The emissions from a traditional gas-powered vehicle contain carbon monoxide, benzene, nitrogen oxides, and other poisonous compounds. These emissions can cause harm to human health and the environment. Reducing these emissions is a primary benefit of driving a hybrid vehicle.

The cost of purchasing a hybrid vehicle is very competitive with the

CONTINUED ON PAGE 4

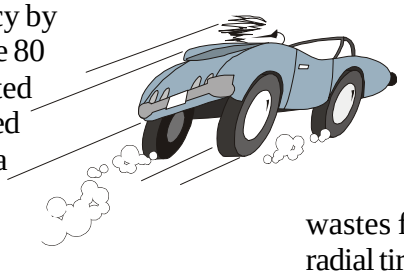
Please circulate this issue among your staff and coworkers.

No Hybrid—No Sweat

Other Ways to Drive Fuel Smart

Perhaps you are not in the market for a new vehicle. You can still help reduce the use of petroleum-based fuels and protect the environment. You simply need to drive efficiently.

Drive at or below the speed limit. Richard Slama, Environmental Health Specialist, reports that, "My 2004 Toyota gets about 26 m.p.g. at 75 m.p.h. However, I get about 35 m.p.g. when I drive 47 m.p.h." Some drivers report that they obtain around 10% better fuel efficiency by driving 60-65 m.p.h. on Interstate 80 in Nebraska rather than the posted 75 m.p.h. In town, with lower speed limits, you probably won't notice a significant change in fuel efficiency between 25 m.p.h. and 35 m.p.h.



Avoid "jackrabbit" starts. Accelerate slowly and smoothly.

Learn to coast. Coast up to stop signs, slow curves, and to prepare to stop instead of coming up fast and then using the breaks to stop fast. Chris Schroeder, Environmental Health Specialist, says, "Running up to a stop sign or light, then slamming on the brakes, wastes a lot of energy." A driver builds up energy just to lose it in rapid braking.

In addition to saving fuel, you reduce wear and tear on your tires and brakes. You are less likely to become involved in an accident if you allow yourself more room to stop rather than braking at the last second. Jackrabbit starts and sharp braking can increase fuel use by about 40% according to many experts.

Plan trips; group trips together. Make one trip to do all your errands. Plan a route that will reduce drive time, eliminate backtracking, and avoid traffic congestion. It is better to make one or two longer trips than several shorter ones. Most vehicles produce harmful emissions when the engine is cold.

Don't idle. It's been said that idling yields zero miles per gallon. If you know, or suspect, that you will have to wait for more than a minute, turn off the engine. Obviously, this is not practical, and not advisable, in traffic. Nonetheless, when waiting at the bank, in front of a store or school, at a railroad crossing for a train to pass, or any other situation in which you are essentially parked, turn off the engine.

Care for your car. Keep your vehicle's engine properly tuned and maintained.

Keep tires properly inflated. Underinflated tires create drag, which wastes fuel. Also, they tend to wear out faster. Use radial tires with good tread and replace them when the tread becomes too worn. Purchase and use a tread depth gauge. Alternatively, you can also trust Honest Abe: stick a penny into the grooves, with Lincoln's head down. Replace your tires if you can see the top of Lincoln's head.

Don't carry unnecessary loads. Weight increases drag and makes the engine and tires work harder. It takes more fuel to start up and maintain momentum. Only carry the items in your vehicle you really need.

Don't drive. The best way to save money on fuel is to not use fuel. Carpool, take public transportation, or use alternative transportation: walk, bike, or skate. Short trips of only a few blocks are ideal opportunities to avoid driving. In some cases, this option might not be feasible, but look for occasions to keep the car, van, SUV, or truck in the garage.

Don't be "fuelish": drive fuel smart.

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Local Businesses Improve the Environment

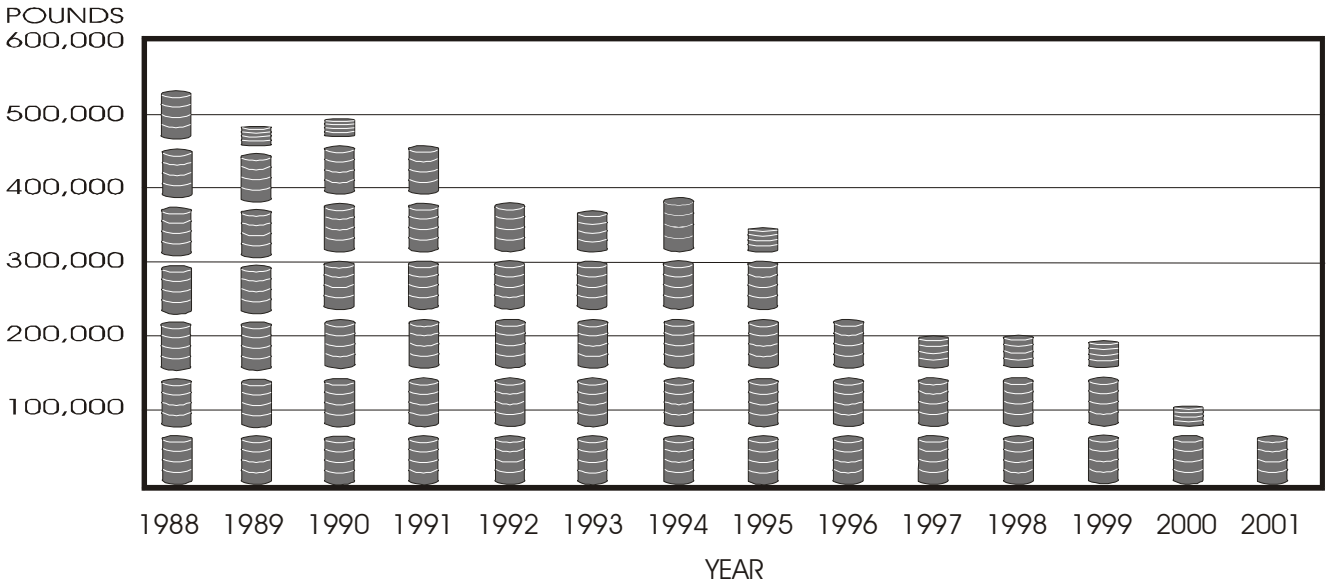
BILL LYONS, C.H.M.M., ENVIRONMENTAL HEALTH SPECIALIST II

Local businesses have taken the lead in protecting the environment. They have substituted non toxic materials for hazardous ones. They have changed processes that have reduced the number of releases. They have improved efficiencies to reduce waste. These improvements are documented in the Toxic Release Inventory.

Industries in Lincoln and Lancaster County have significantly reduced the release, disposal, and treatment of these chemicals since 1998. Two major Lincoln industries have been credited with over one-half of all reduced toxic releases. They quit using highly hazardous materials and began using significantly less toxic chemicals (see the list of chemicals accompanying the chart). The lower release totals also reflect a more efficient reuse of the chemicals (such as filtering and reconditioning).

Toxic Releases in Lincoln and Lancaster County

(total pounds released per year)



The most significant chemicals:

N-Hexane	Hydrogen Flouride
Barium Compounds	Hydrochloric Acid
Toluene	Methyl Ethyl Ketone
1,2,4-Trimethylbenzene	

The United States Environmental Protection Agency (EPA) distributes Toxic Release Inventory (TRI) data. The TRI data reflects information

CONTINUED ON PAGE 4

HYBRID CAR (CONTINUED FROM PAGE 1)

cost of buying a non-hybrid vehicle. While the cost of this hybrid vehicle was more than a non-hybrid Civic, the savings in fuel costs significantly makes up the difference. The benefits of creating less air pollution add value. Hybrid components for Honda Civic Hybrid are covered by a 8 yr., 80,000 mile warranty. In addition, the growing number of makes and models ensure there is a vehicle to suit various consumer needs.

Some hybrids do not have the horsepower that traditional, gasoline-powered vehicles have; others actually have more. The Honda Civic is rated at 93 h.p. LLCHD staff who have driven in the vehicle report that it has "plenty of get-up-and-go" for around town driving. They say that it rides smoothly and seems to have good handling characteristics. They also appreciate the quiet ride.

The savings realized from improved fuel efficiency and the human health benefits of reduced harmful emissions make it, and other hybrids, attractive. Through the purchase and use of this hybrid vehicle, the LLCHD is walking the walk of environment stewardship and public health protection.

TRI (CONTINUED FROM PAGE 3)

collected from any one of 30 industries in Lincoln that are required to report the chemicals brought into their sites, used in production, disposed of as waste, or released either accidentally or intentionally. These documents report any type of release of any of 650 chemicals listed in Section 313 of the Emergency Planning and Community Right to Know Act (EPCRA) of 1986.

The Pollution Prevention Act of 1990 mandates that businesses collect and report data on toxic chemicals that are treated on-site, recycled, or combusted for energy recovery. These releases are reported on Form R. The goal of these acts is to reduce emissions of toxic chemicals that can harm human health and the environment.

Recognizing the need for worker and public safety, local businesses have taken steps to protect human health and the environment. Their good environmental stewardship, leadership, and business practices have made life in Lincoln better for everyone.

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